

Appendix RF test data for 5G WIFI_NII band 3

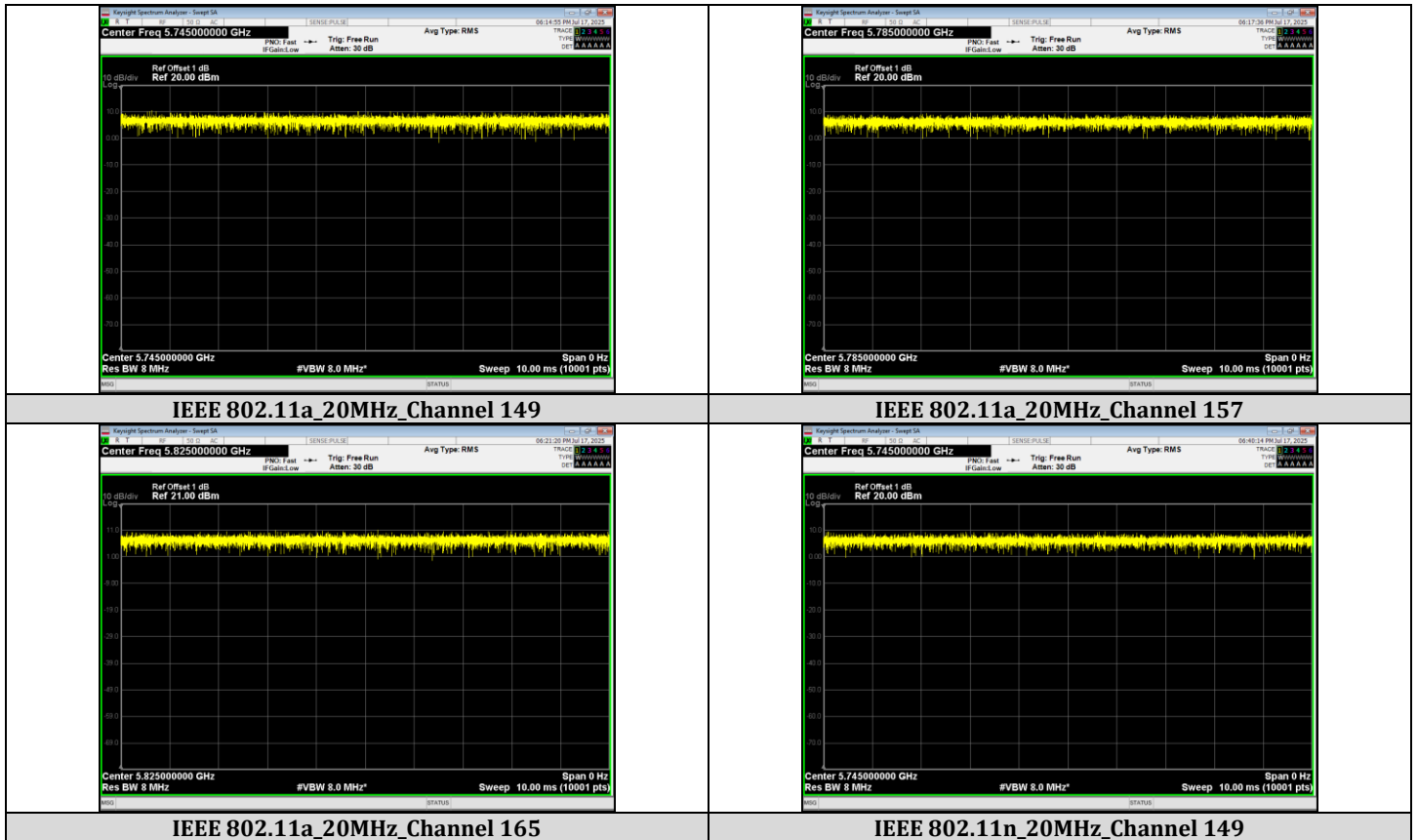


Duty Cycle

Test Result

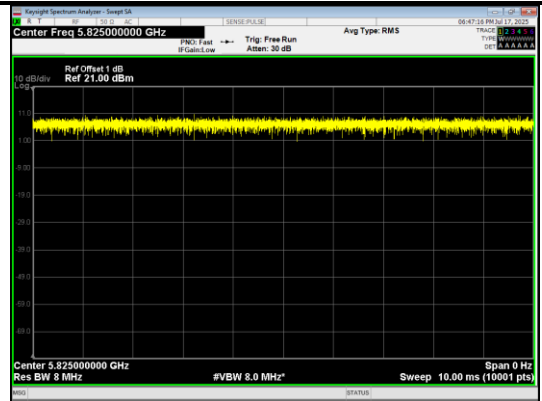
Mode	Data rates	Channel	Antenna	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
IEEE 802.11a	6	149	1	10.000	10.000	100	1	0.0	0.1000
		157		10.000	10.000	100	1	0.0	0.1000
		165		10.000	10.000	100	1	0.0	0.1000
IEEE 802.11n_20	149	10.000		10.000	100	1	0.0	0.1000	
	157	10.000		10.000	100	1	0.0	0.1000	
	165	10.000		10.000	100	1	0.0	0.1000	
IEEE 802.11n_40	151	10.000		10.000	100	1	0.0	0.1000	
	159	10.000		10.000	100	1	0.0	0.1000	
IEEE 802.11ac_20	MCS 0	149		10.000	10.000	100	1	0.0	0.1000
		157		10.000	10.000	100	1	0.0	0.1000
		165		10.000	10.000	100	1	0.0	0.1000
IEEE 802.11ac_40		151		10.000	10.000	100	1	0.0	0.1000
		159		10.000	10.000	100	1	0.0	0.1000
IEEE 802.11ac_80		155		10.000	10.000	100	1	0.0	0.1000

Test Graphs

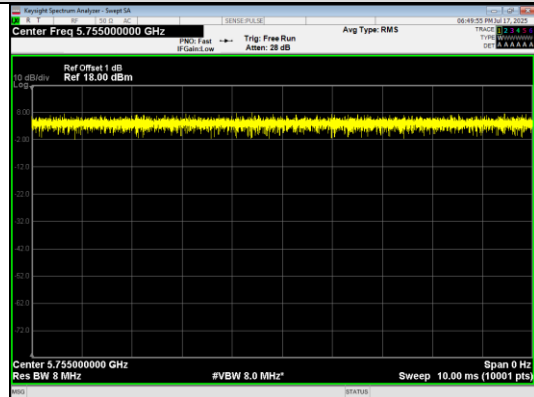




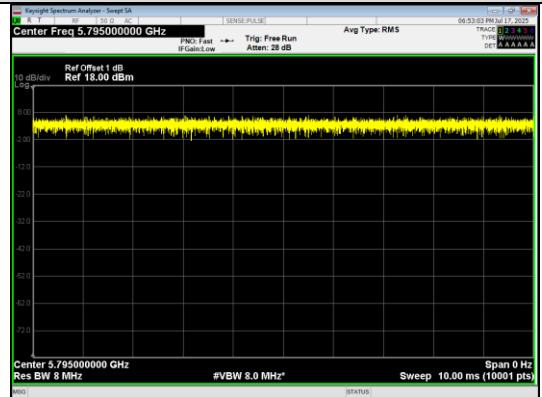
IEEE 802.11n 20MHz_Channel 157



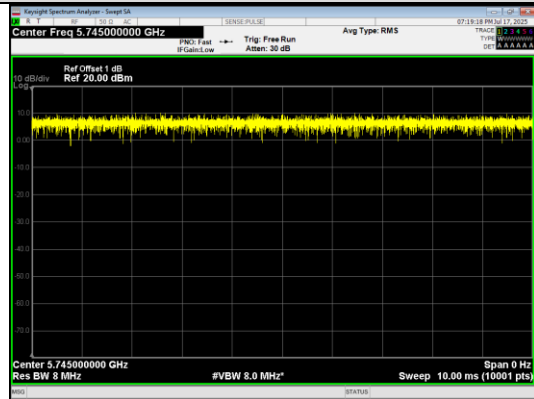
IEEE 802.11n 20MHz_Channel 165



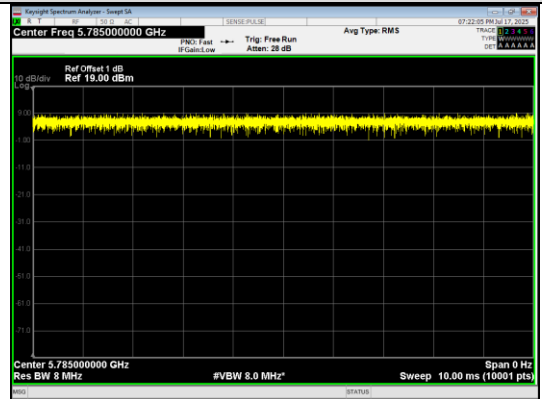
IEEE 802.11n 40MHz_Channel 151



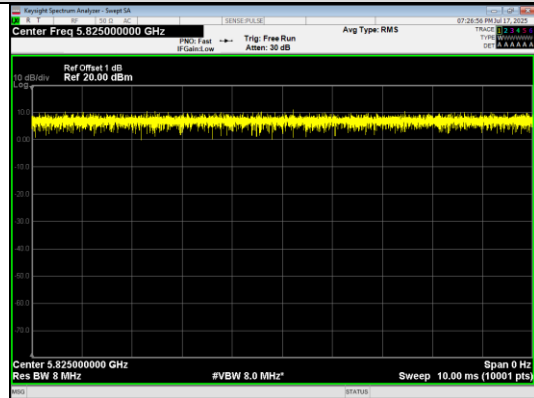
IEEE 802.11n 40MHz_Channel 159



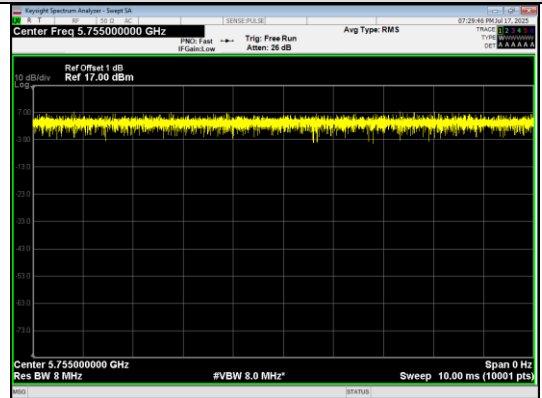
IEEE 802.11ac 20MHz_Channel 149



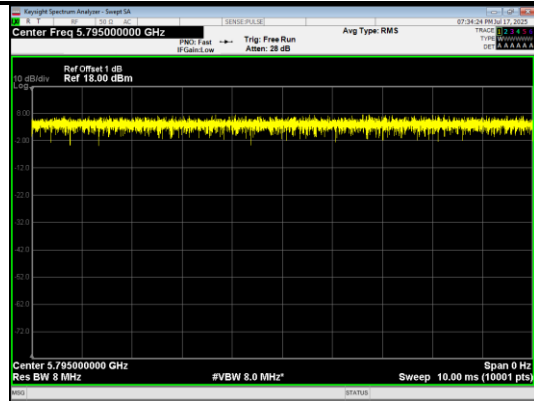
IEEE 802.11ac 20MHz_Channel 157



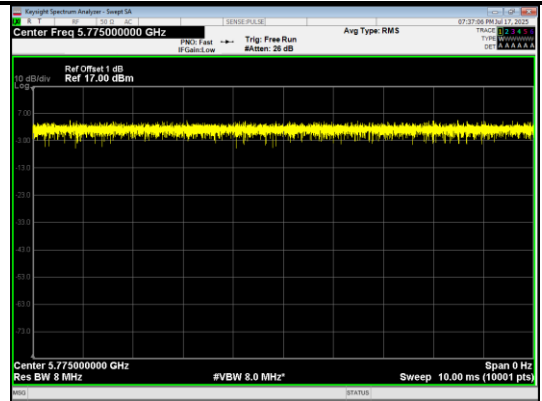
IEEE 802.11ac 20MHz_Channel 165



IEEE 802.11ac 40MHz_Channel 151



IEEE 802.11ac_40MHz_Channel 159



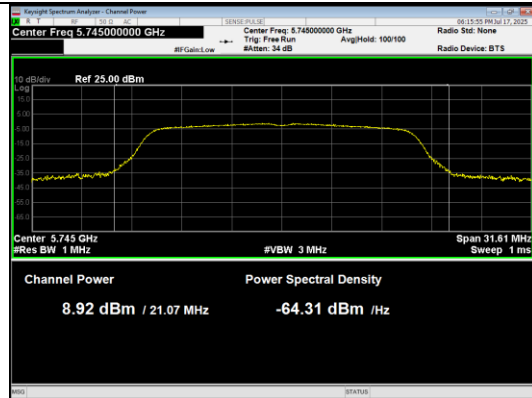
IEEE 802.11ac_80MHz_Channel 155

Conducted Output Power

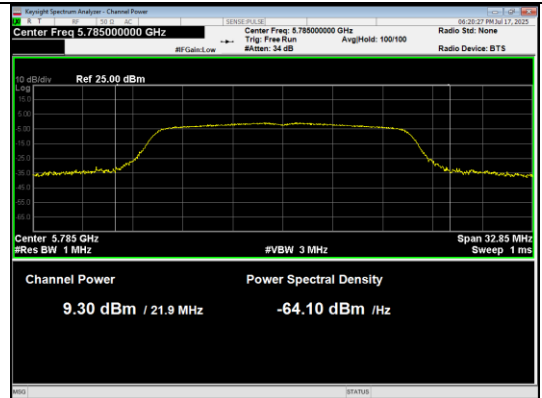
Conducted output power

Mode	Channel	Ant. 0 (dBm)	Corr'd Value Ant. 0 (dBm)	Limit (dBm)	Result
IEEE 802.11a	149	8.92	8.92	≤30	PASS
	157	9.30	9.3	≤30	PASS
	165	9.87	9.87	≤30	PASS
IEEE 802.11n_20	149	9.21	9.21	≤30	PASS
	157	9.35	9.35	≤30	PASS
	165	9.92	9.92	≤30	PASS
IEEE 802.11n_40	151	9.74	9.74	≤30	PASS
	159	9.31	9.31	≤30	PASS
IEEE 802.11ac_20	149	8.98	8.98	≤30	PASS
	157	9.36	9.36	≤30	PASS
	165	9.78	9.78	≤30	PASS
IEEE 802.11ac_40	151	8.83	8.83	≤30	PASS
	159	9.73	9.73	≤30	PASS
IEEE 802.11ac_80	155	9.79	9.79	≤30	PASS

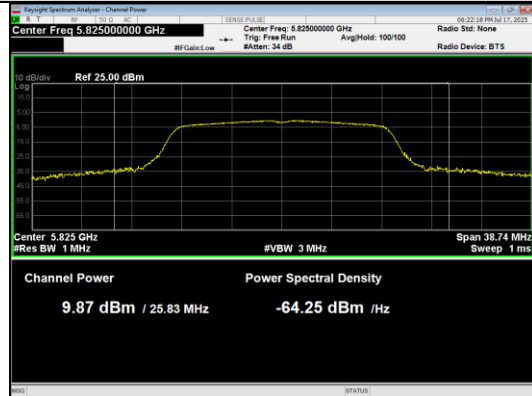
Note: Corrected Value = Antenna Power + Duty Cycle Factor.



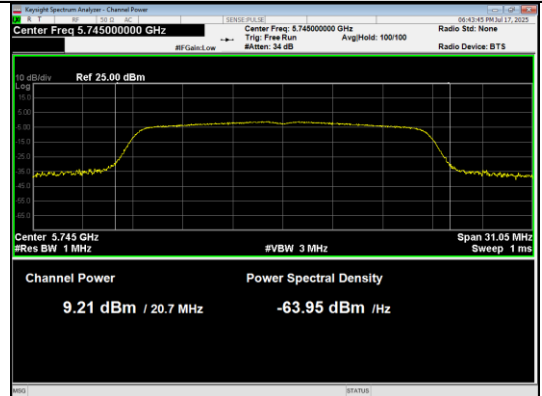
Conducted AVG output power
IEEE 802.11a_Channel 149_Antenna 0



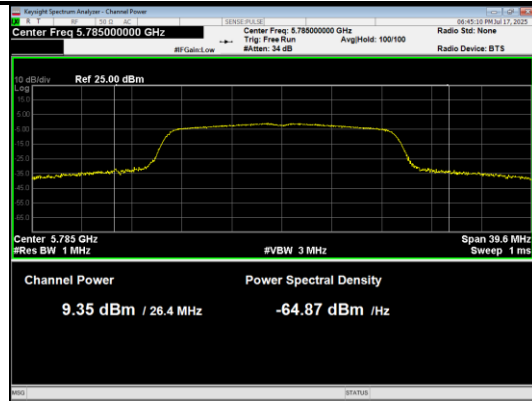
Conducted AVG output power
IEEE 802.11a_Channel 157_Antenna 0



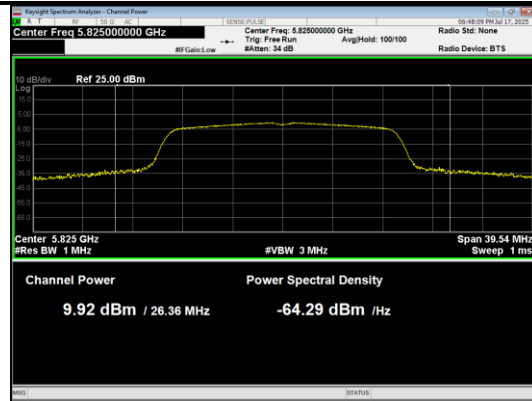
Conducted AVG output power
IEEE 802.11a_Channel 165_Antenna 0



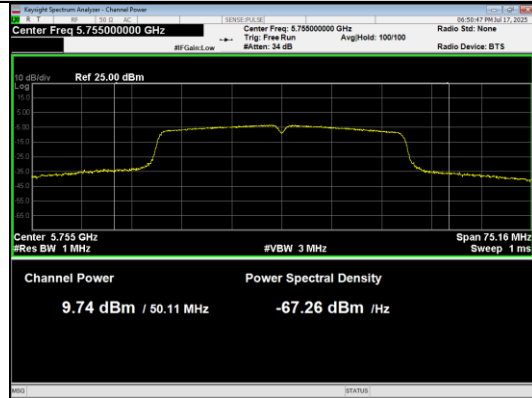
Conducted AVG output power
IEEE 802.11n_20_Channel 149_Antenna 0



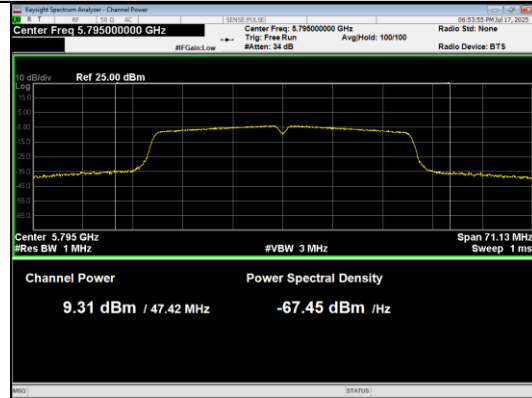
Conducted AVG output power
IEEE 802.11n_20_Channel 157_Antenna 0



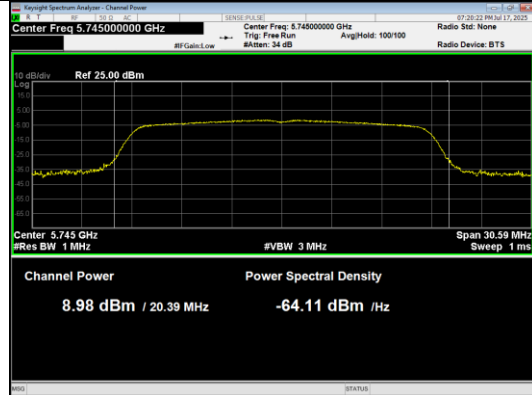
Conducted AVG output power
IEEE 802.11n_20_Channel 165_Antenna 0



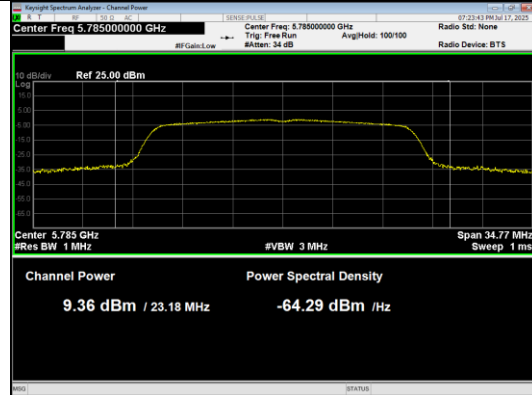
Conducted AVG output power
IEEE 802.11n_40_Channel 151_Antenna 0



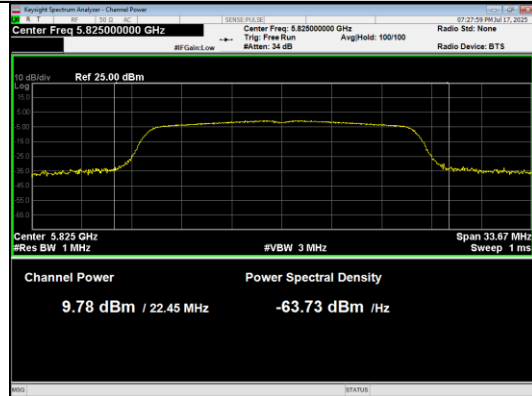
Conducted AVG output power
IEEE 802.11n_40_Channel 159_Antenna 0



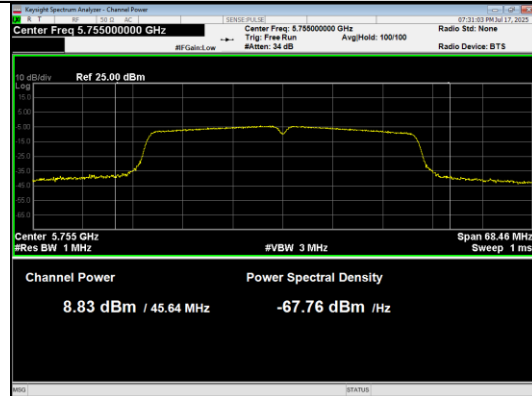
Conducted AVG output power
IEEE 802.11ac_20_Channel 149_Antenna 0



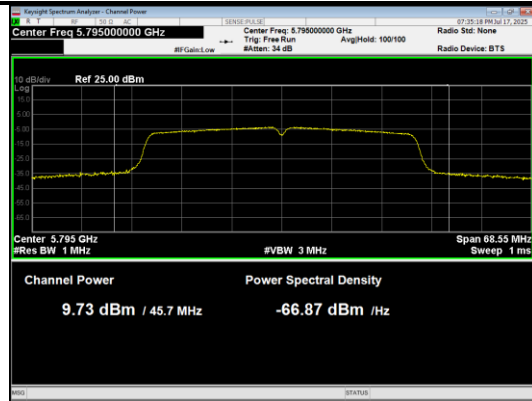
Conducted AVG output power
IEEE 802.11ac_20_Channel 157_Antenna 0



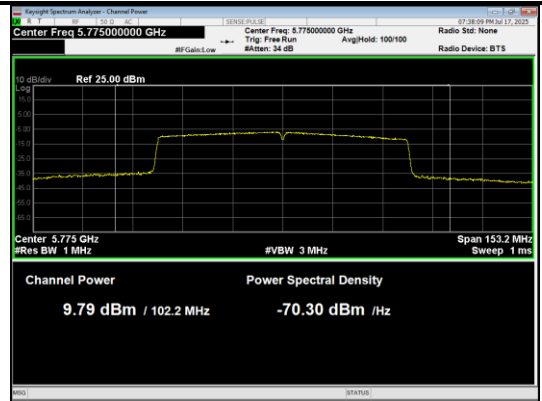
Conducted AVG output power
IEEE 802.11ac_20_Channel 165_Antenna 0



Conducted AVG output power
IEEE 802.11ac_40_Channel 151_Antenna 0



Conducted AVG output power
 IEEE 802.11ac_40_Channel 159_Antenna 0



Conducted AVG output power
 IEEE 802.11ac_80_Channel 155_Antenna 0

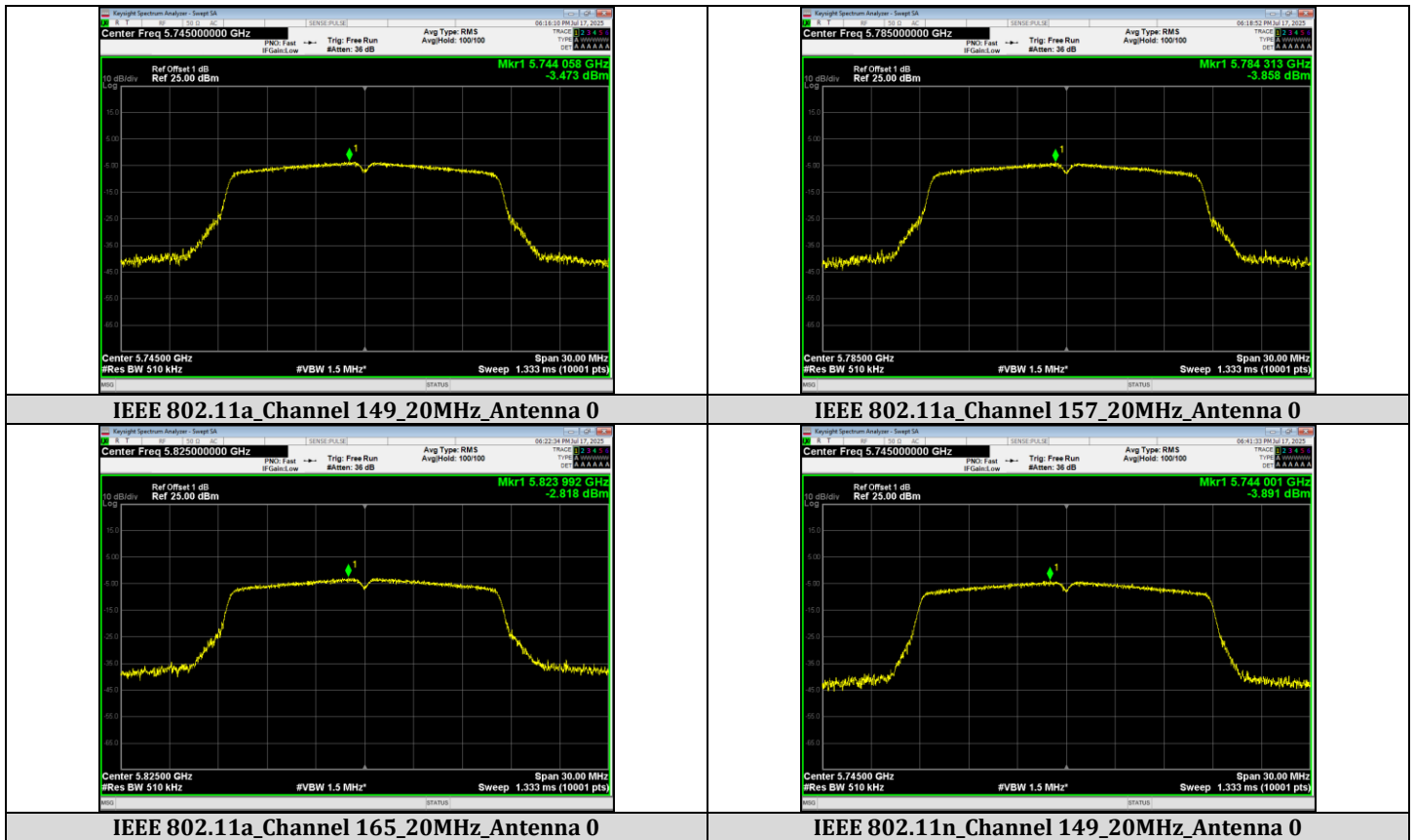


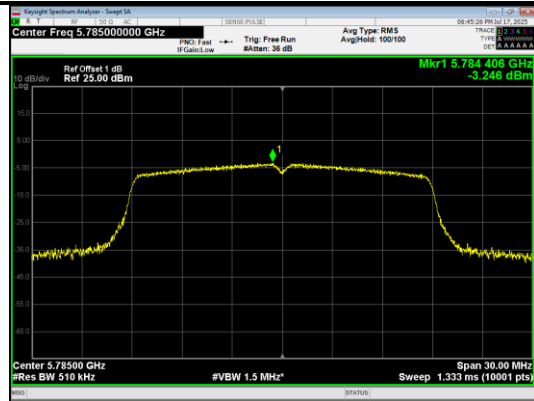
Peak Power Spectral Density

Test Result

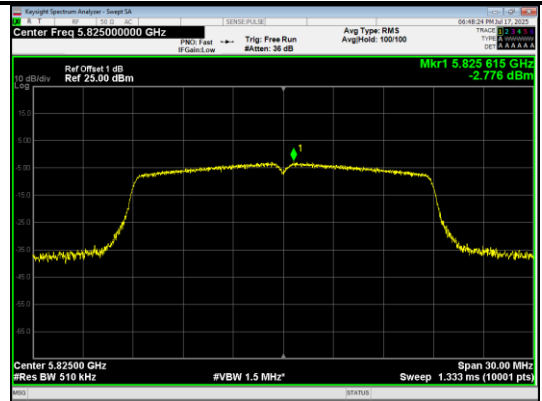
Mode	Channel	Ant. 0 Meas PSD (dBm/MHz or dBm/0.5MHz)	Ant. 0 Corr'd PSD (dBm/MHz or dBm/0.5MHz)	Limit (dBm/MHz or dBm/0.5MHz)	Result
IEEE 802.11a	149	-3.470	-3.47	30	PASS
	157	-3.860	-3.86		PASS
	165	-2.820	-2.82		PASS
IEEE 802.11n_20	149	-3.890	-3.89		PASS
	157	-3.250	-3.25		PASS
	165	-2.780	-2.78		PASS
IEEE 802.11n_40	151	-5.740	-5.74		PASS
	159	-6.090	-6.09		PASS
IEEE 802.11ac_20	149	-3.660	-3.66		PASS
	157	-3.150	-3.15		PASS
	165	-2.920	-2.92		PASS
IEEE 802.11ac_40	151	-6.610	-6.61		PASS
	159	-5.800	-5.8		PASS
IEEE 802.11ac_80	155	-8.800	-8.8		PASS

Test Graphs

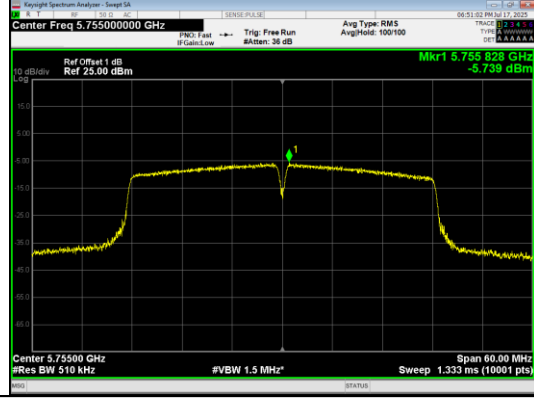




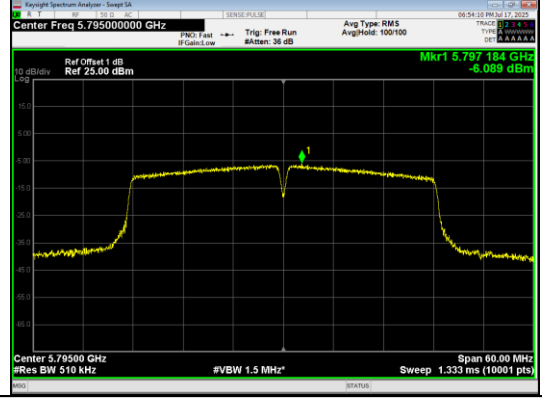
IEEE 802.11n_Channel 157_20MHz_Antenna 0



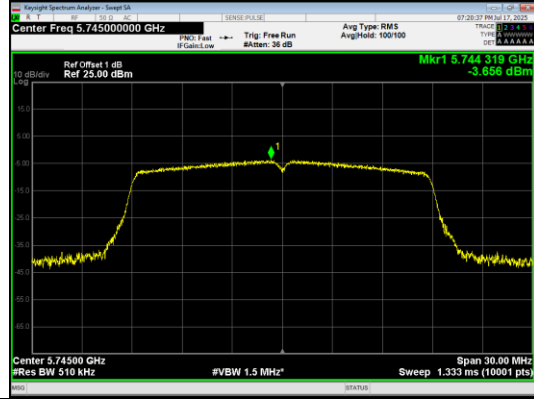
IEEE 802.11n_Channel 165_20MHz_Antenna 0



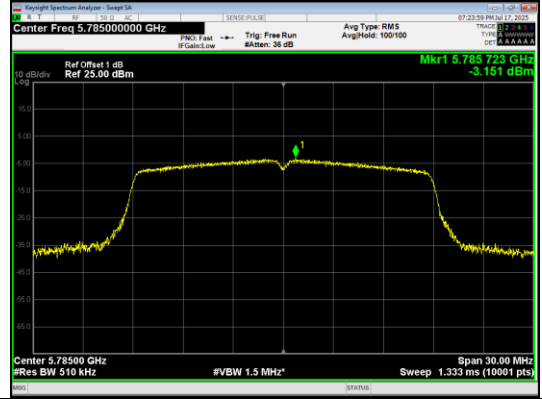
IEEE 802.11n_Channel 151_40MHz_Antenna 0



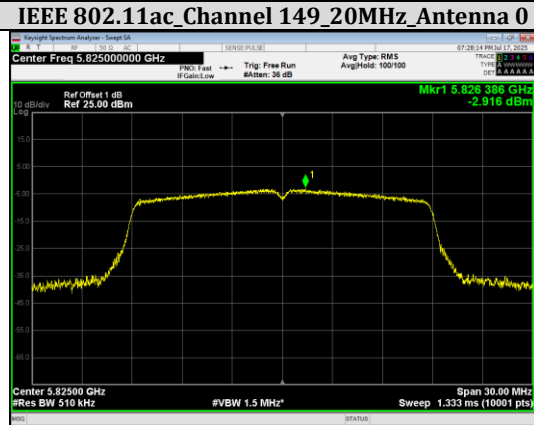
IEEE 802.11n_Channel 159_40MHz_Antenna 0



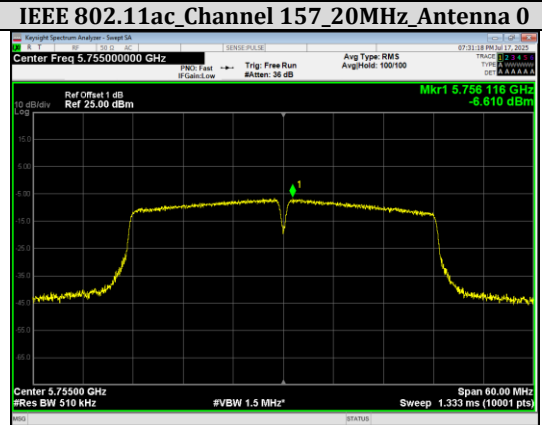
IEEE 802.11n_Channel 151_40MHz_Antenna 0



IEEE 802.11n_Channel 159_40MHz_Antenna 0



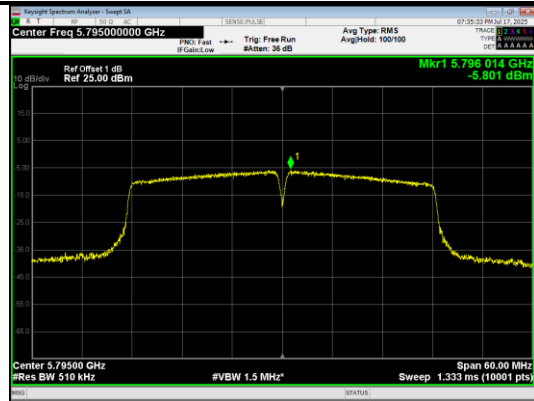
IEEE 802.11ac_Channel 149_20MHz_Antenna 0



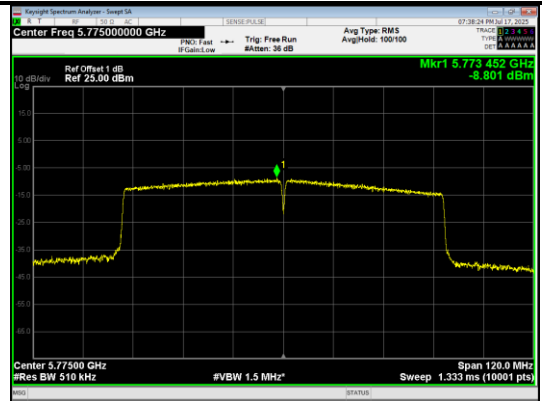
IEEE 802.11ac_Channel 157_20MHz_Antenna 0

IEEE 802.11ac_Channel 165_20MHz_Antenna 0

IEEE 802.11ac_Channel 151_40MHz_Antenna 0



IEEE 802.11ac_Channel 159_40MHz_Antenna 0



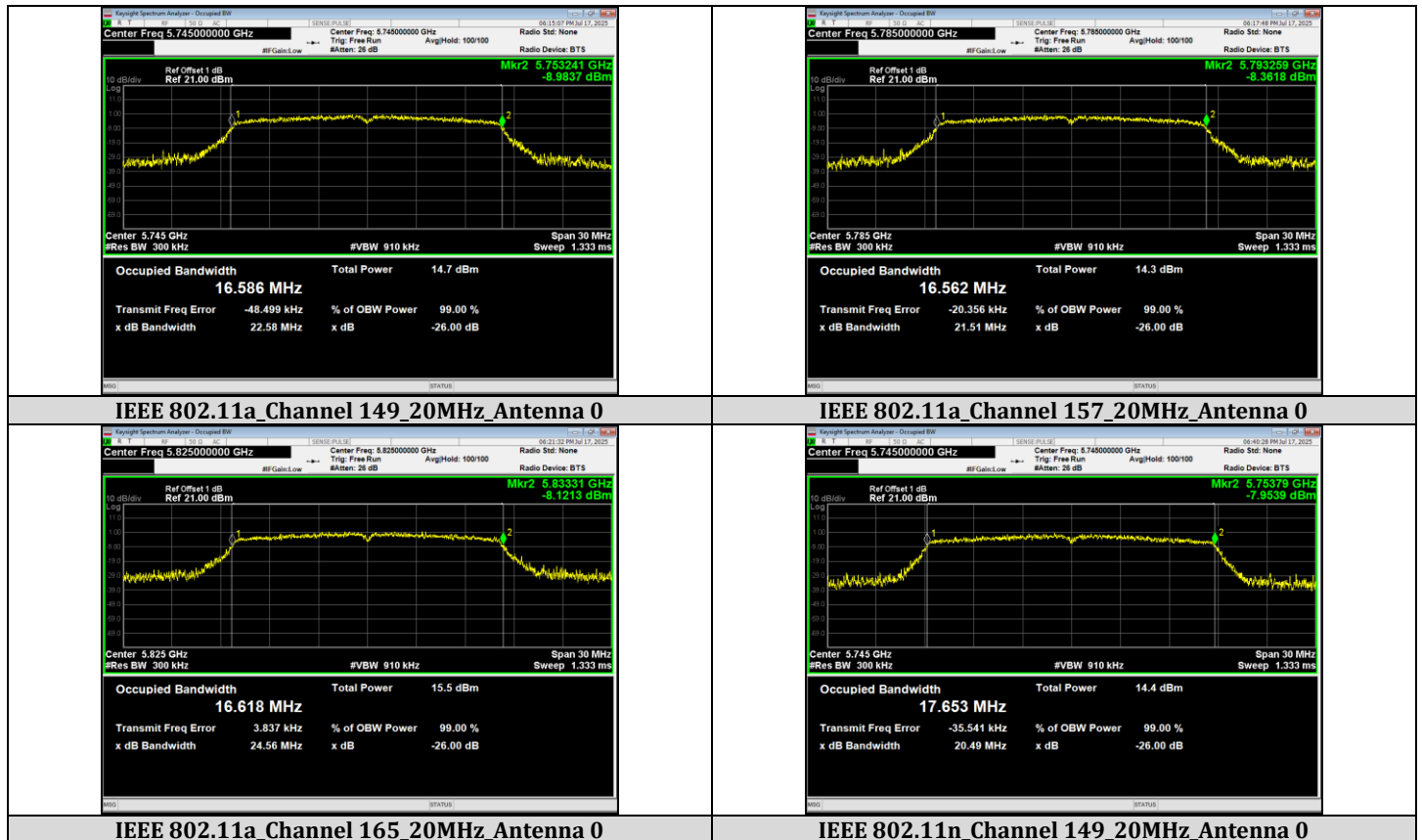
IEEE 802.11ac_Channel 155_80MHz_Antenna 0

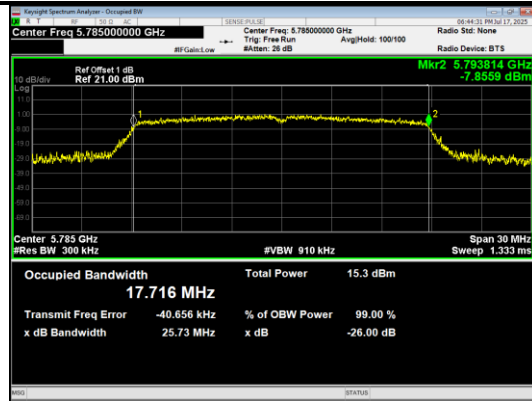
99% Bandwidth

Test Result

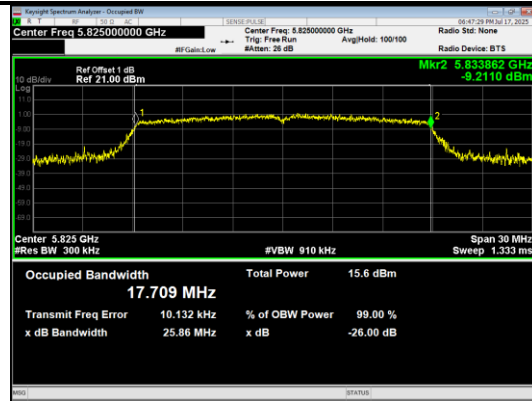
Mode	Channel	Ant.	Center Frequency (MHz)	99% BW (MHz)
IEEE 802.11a	149	0	5745	16.586
	157		5785	16.562
	165		5825	16.618
IEEE 802.11n_20	149		5745	17.653
	157		5785	17.716
	165		5825	17.709
IEEE 802.11n_40	151		5755	36.084
	159		5795	36.127
IEEE 802.11ac_20	149		5745	17.671
	157		5785	17.645
	165		5825	17.676
IEEE 802.11ac_40	151		5755	35.983
	159		5795	36.078
IEEE 802.11ac_80	155		5775	75.391

Test Graphs

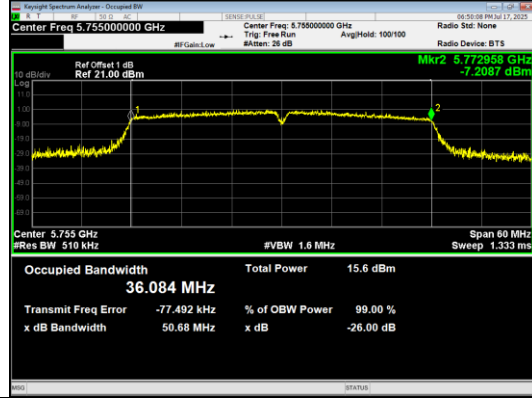




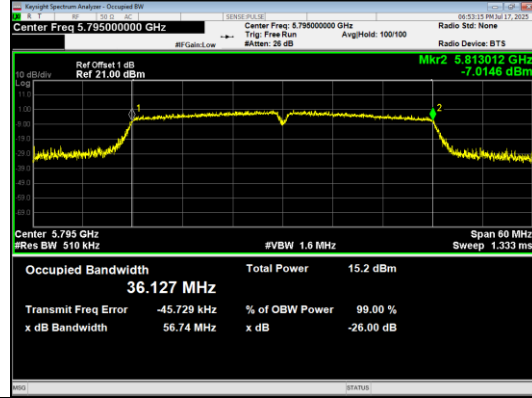
IEEE 802.11n_Channel 157_20MHz_Antenna 0



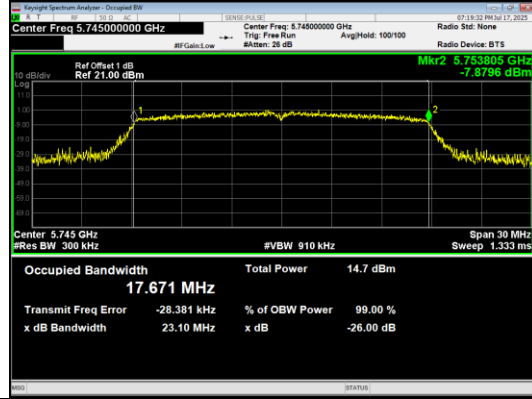
IEEE 802.11n_Channel 165_20MHz_Antenna 0



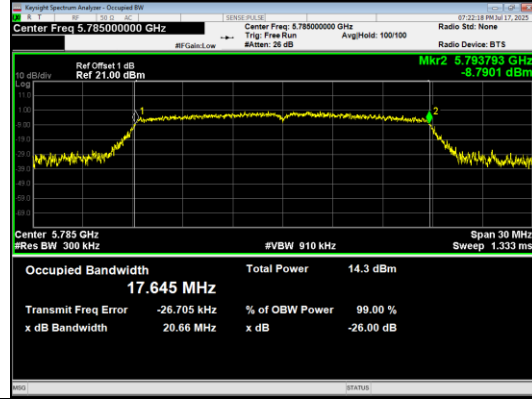
IEEE 802.11n_Channel 151_40MHz_Antenna 0



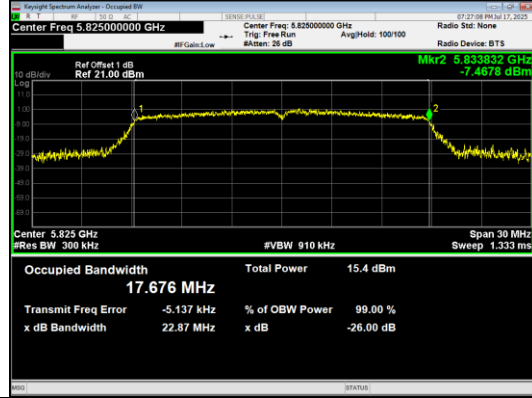
IEEE 802.11n_Channel 159_40MHz_Antenna 0



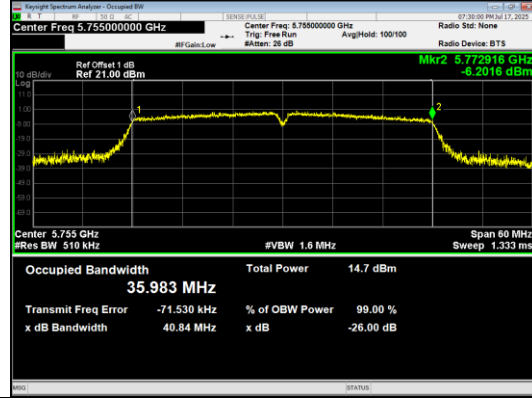
IEEE 802.11ac_Channel 149_20MHz_Antenna 0



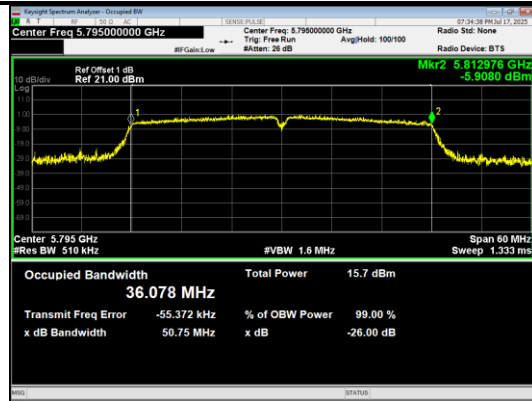
IEEE 802.11ac_Channel 157_20MHz_Antenna 0



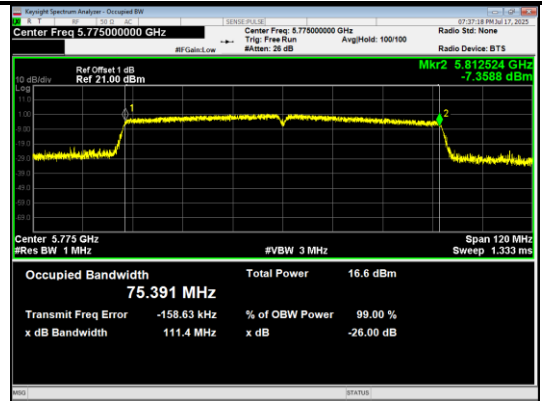
IEEE 802.11ac_Channel 165_20MHz_Antenna 0



IEEE 802.11ac_Channel 151_40MHz_Antenna 0



IEEE 802.11ac_Channel 159_40MHz_Antenna 0



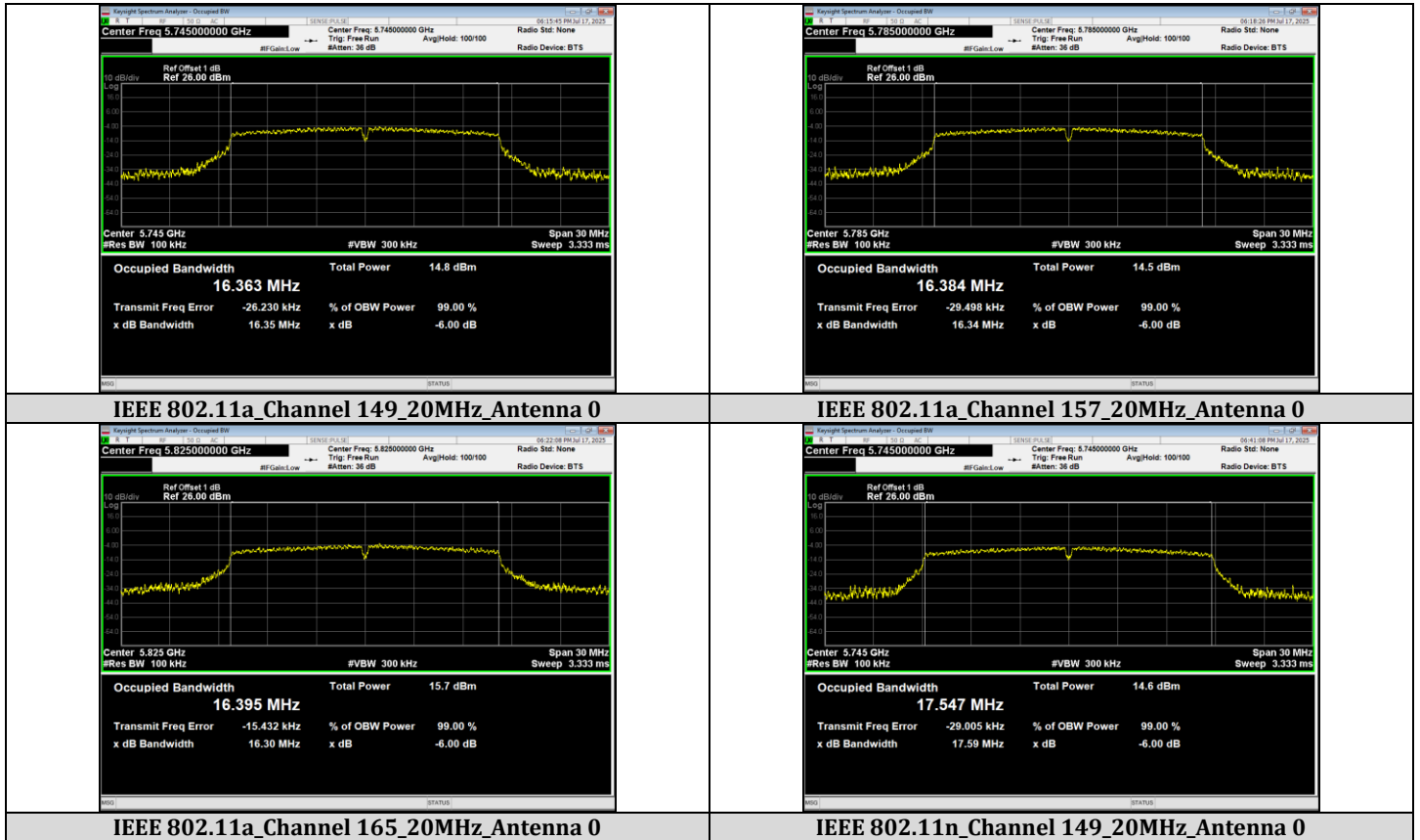
IEEE 802.11ac_Channel 155_80MHz_Antenna 0

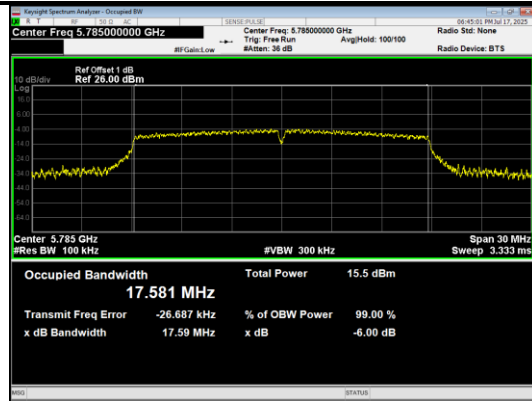
6dB Bandwidth

Test Result

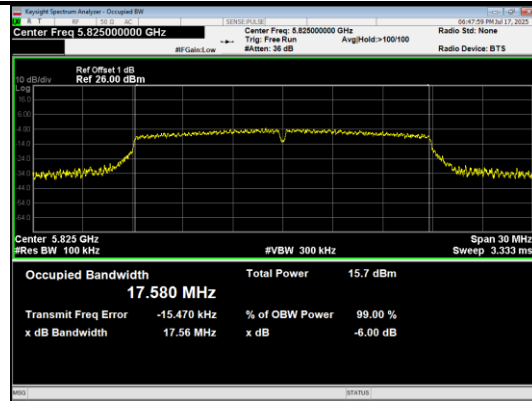
Mode	Channel	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11a	149	0	5745	16.35	≥0.5	PASS
	157		5785	16.34		PASS
	165		5825	16.30		PASS
IEEE 802.11n_20	149		5745	17.59		PASS
	157		5785	17.59		PASS
	165		5825	17.56		PASS
IEEE 802.11n_40	151		5755	36.29		PASS
	159		5795	36.08		PASS
IEEE 802.11ac_20	149		5745	17.58		PASS
	157		5785	17.58		PASS
	165		5825	17.58		PASS
IEEE 802.11ac_40	151		5755	35.84		PASS
	159		5795	36.28		PASS
IEEE 802.11ac_80	155		5775	75.94		PASS

Test Graphs

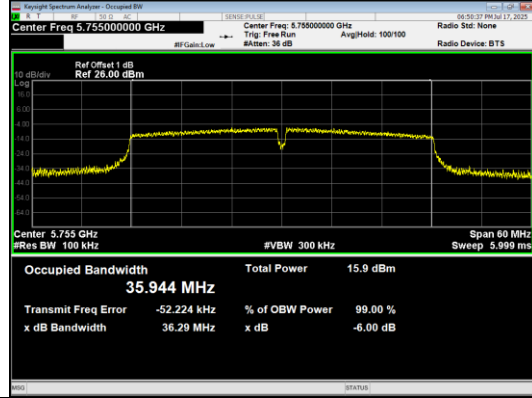




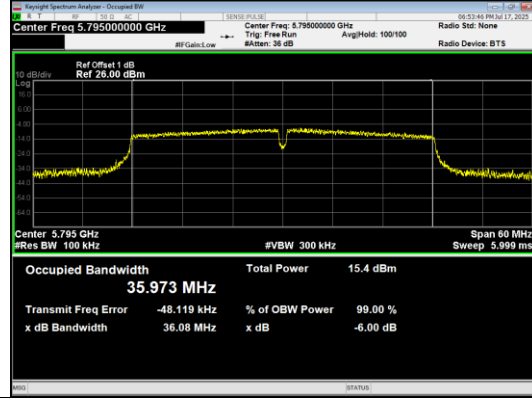
IEEE 802.11n_Channel 157_20MHz_Antenna 0



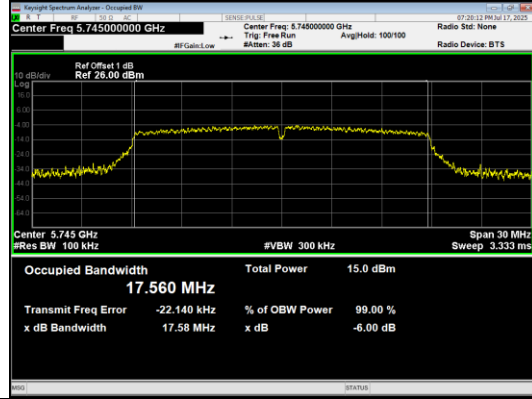
IEEE 802.11n_Channel 165_20MHz_Antenna 0



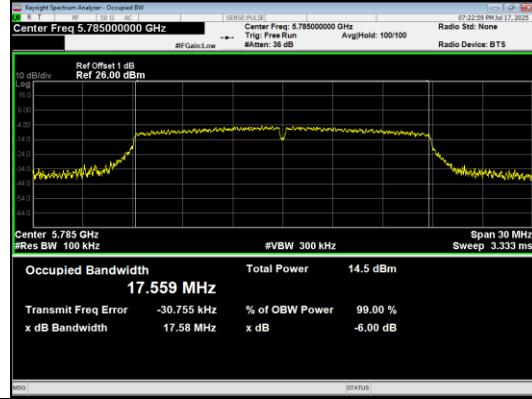
IEEE 802.11n_Channel 151_40MHz_Antenna 0



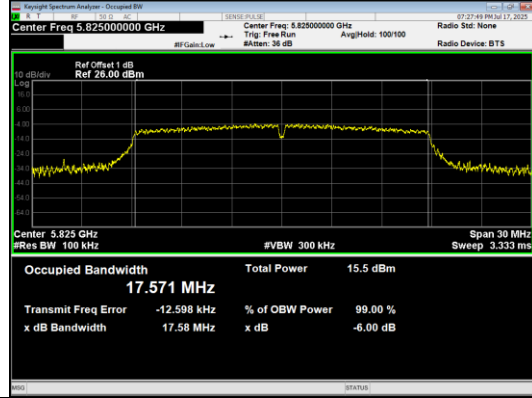
IEEE 802.11n_Channel 159_40MHz_Antenna 0



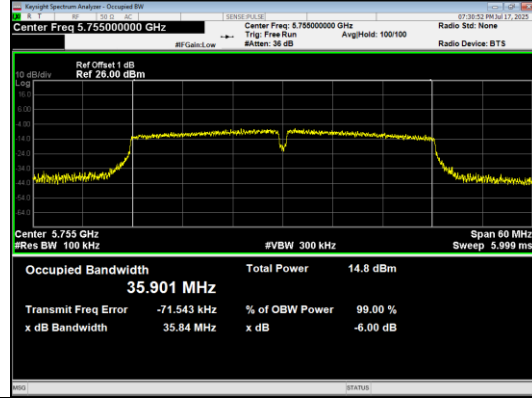
IEEE 802.11ac_Channel 149_20MHz_Antenna 0



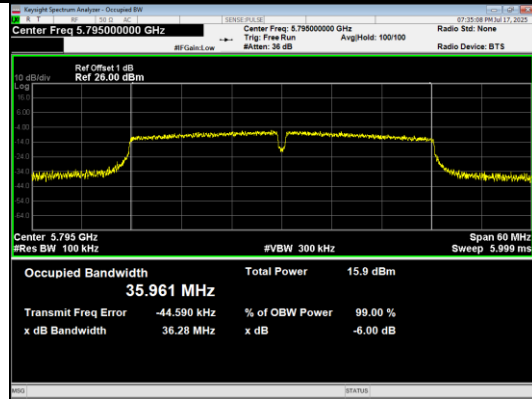
IEEE 802.11ac_Channel 157_20MHz_Antenna 0



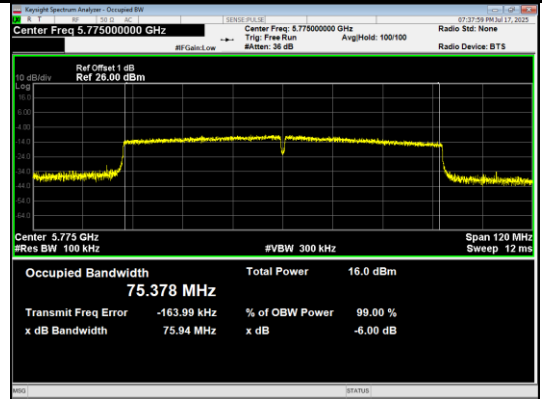
IEEE 802.11ac_Channel 165_20MHz_Antenna 0



IEEE 802.11ac_Channel 151_40MHz_Antenna 0



IEEE 802.11ac_Channel 159_40MHz_Antenna 0



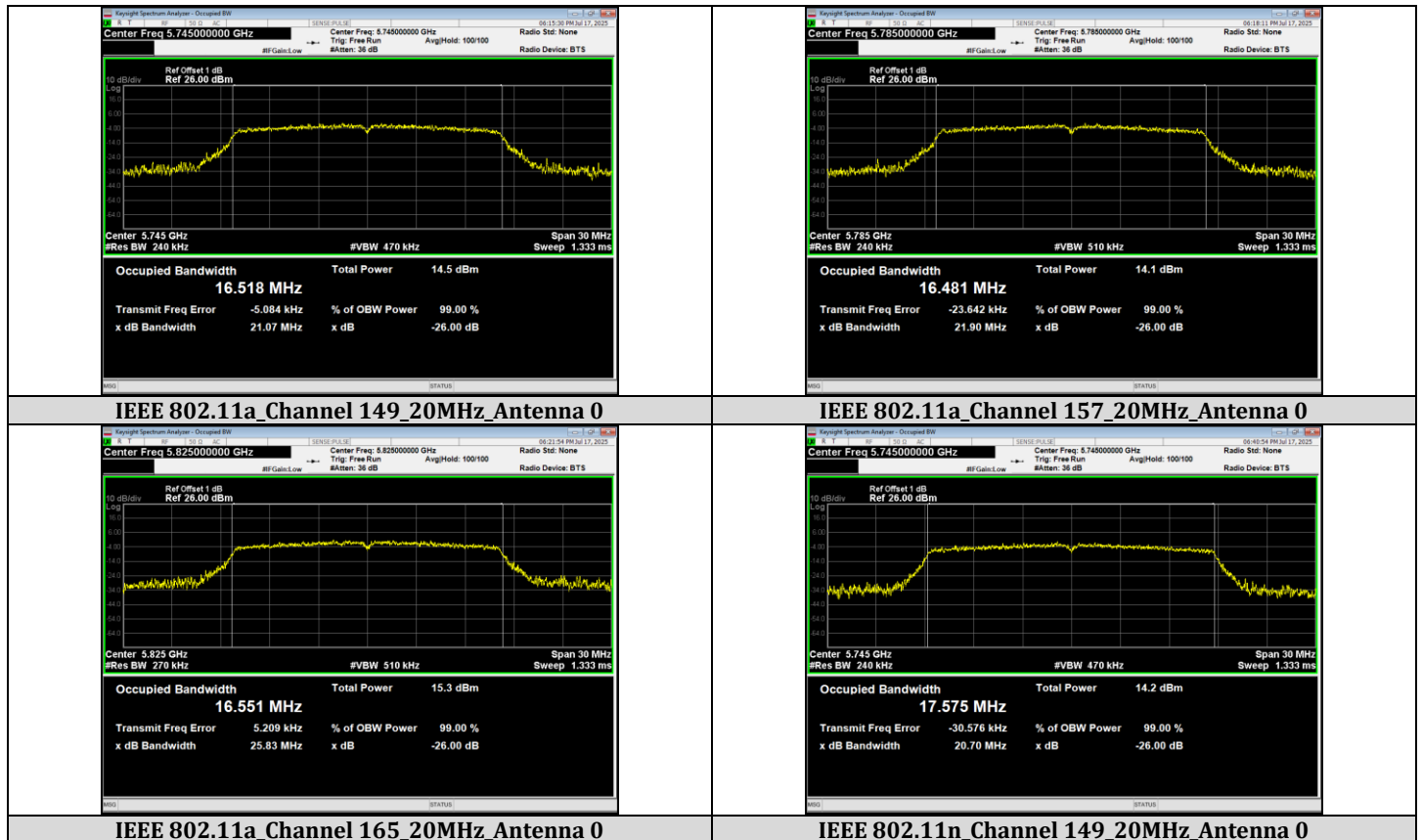
IEEE 802.11ac_Channel 155_80MHz_Antenna 0

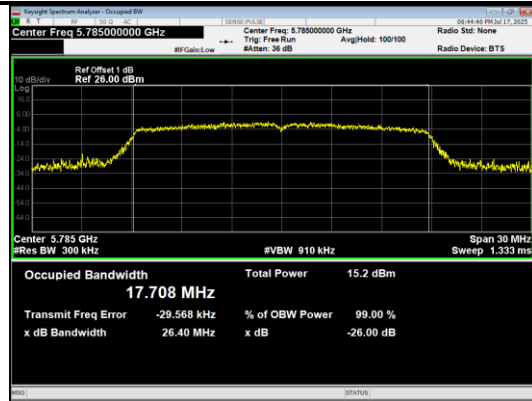
26dB Bandwidth

Test Result

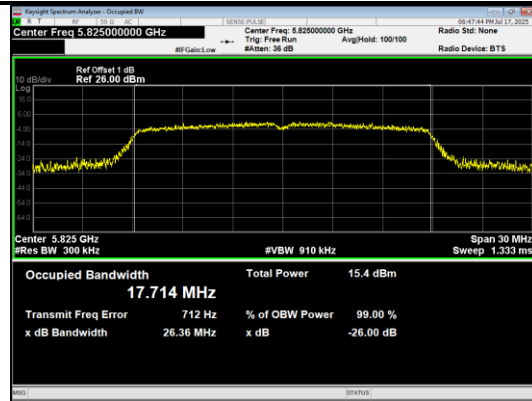
Mode	Channel	Ant.	Center Frequency (MHz)	26 dB Bandwidth (MHz)	RBW/EBW
IEEE 802.11a	149	0	5745	21.07	1.12
	157		5785	21.90	1.14
	165		5825	25.83	1.02
IEEE 802.11n_20	149		5745	20.70	1.11
	157		5785	26.40	1.14
	165		5825	26.36	1.14
IEEE 802.11n_40	151		5755	50.11	1.02
	159		5795	47.42	1.08
IEEE 802.11ac_20	149		5745	20.39	1.18
	157		5785	23.18	1.06
	165		5825	22.45	1.16
IEEE 802.11ac_40	151		5755	45.64	1.14
	159		5795	45.70	1.12
IEEE 802.11ac_80	155		5775	102.16	1.04

Test Graphs

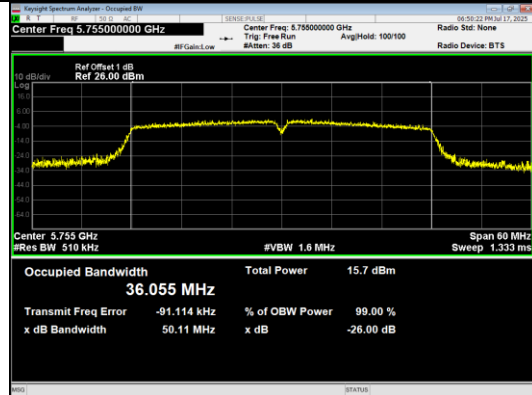




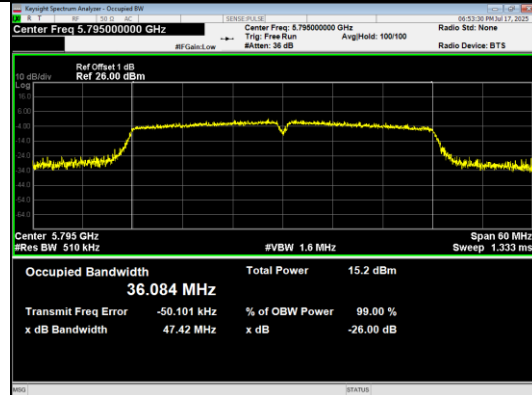
IEEE 802.11n_Channel 157_20MHz_Antenna 0



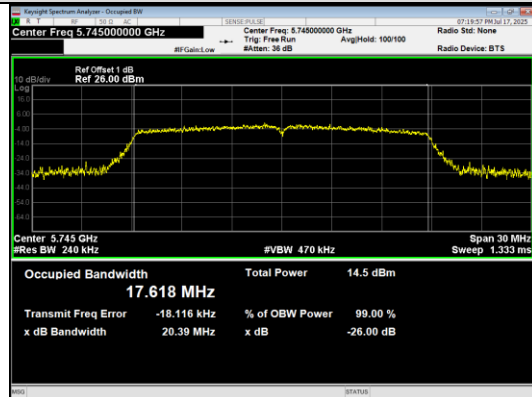
IEEE 802.11n_Channel 165_20MHz_Antenna 0



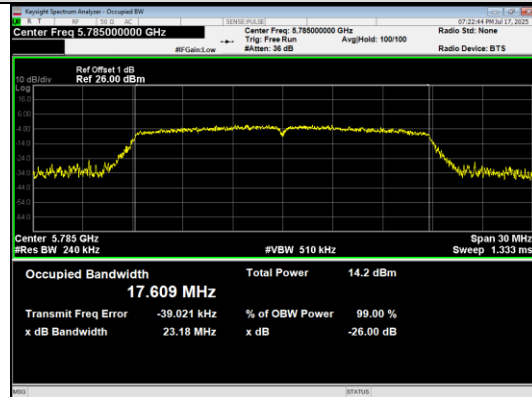
IEEE 802.11n_Channel 151_40MHz_Antenna 0



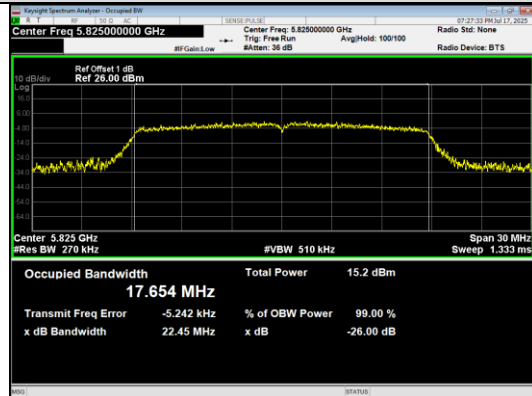
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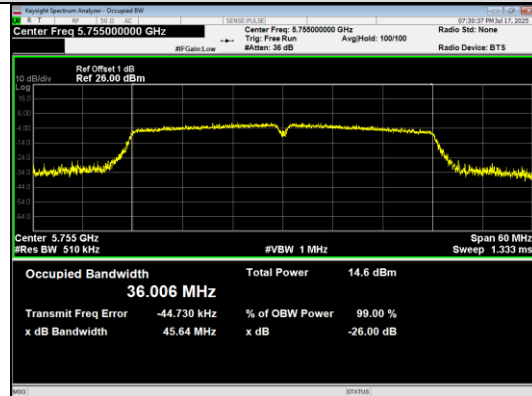
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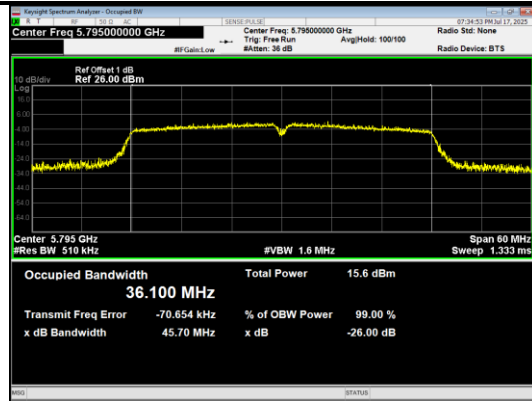
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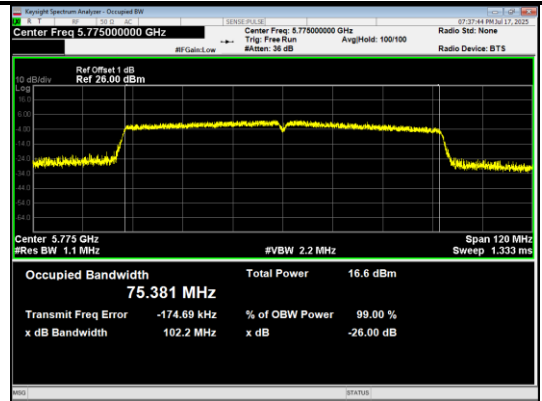
IEEE 802.11ac_Channel 165_20MHz_Antenna 0



IEEE 802.11ac_Channel 151_40MHz_Antenna 0



IEEE 802.11ac_Channel 159_40MHz_Antenna 0



IEEE 802.11ac_Channel 155_80MHz_Antenna 0

Conducted Out Of Band Emission

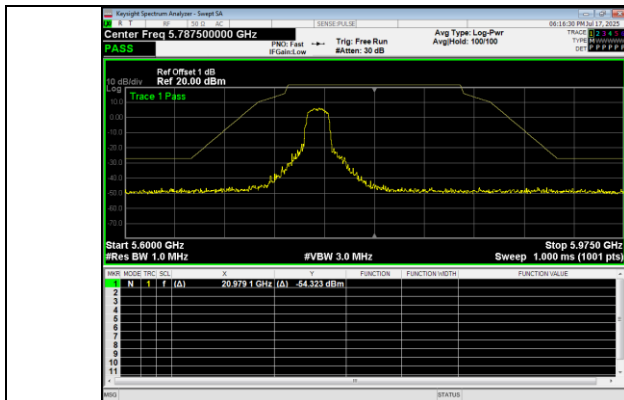
Test Result

Mode	Channel	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
IEEE 802.11a	149	0	1762.08	-32.800	-27	-5.800	PASS
			5642.75	-46.929	-27	-19.929	PASS
			5725.00	-29.860	27	-56.860	PASS
			5850.00	-48.820	27	-75.820	PASS
			5936.38	-47.074	-27	-20.074	PASS
			24312.8	-54.660	-27	-27.660	PASS
	157		3416.75	-42.460	-27	-15.460	PASS
			5629.62	-47.620	-27	-20.620	PASS
			5725.00	-48.260	27	-75.260	PASS
			5850.00	-47.540	27	-74.540	PASS
			5950.62	-47.013	-27	-20.013	PASS
			24391.0	-54.520	-27	-27.520	PASS
	165		3404.53	-45.620	-27	-18.620	PASS
			5624.00	-47.249	-27	-20.249	PASS
			5725.00	-47.970	27	-74.970	PASS
			5850.00	-30.840	27	-57.840	PASS
			5925.50	-45.850	-27	-18.850	PASS
			5930.25	-53.340	-27	-26.340	PASS
IEEE 802.11n_20	149		5635.25	-46.945	-27	-19.945	PASS
			5647.89	-52.210	-27	-25.210	PASS
			5725.00	-30.960	27	-57.960	PASS
			5850.00	-49.460	27	-76.460	PASS
			5940.50	-47.252	-27	-20.252	PASS
			24376.7	-54.860	-27	-27.860	PASS
	157		5634.12	-47.088	-27	-20.088	PASS
			5637.78	-53.070	-27	-26.070	PASS
			5725.00	-46.150	27	-73.150	PASS
			5850.00	-46.590	27	-73.590	PASS
			5934.50	-46.272	-27	-19.272	PASS
			24881.3	-53.670	-27	-26.670	PASS
	165		4660.04	-55.240	-27	-28.240	PASS
			5636.75	-47.736	-27	-20.736	PASS
			5725.00	-49.390	27	-76.390	PASS
			5850.00	-26.550	27	-53.550	PASS
			5930.72	-53.330	-27	-26.330	PASS
			5934.88	-45.639	-27	-18.639	PASS
IEEE 802.11n_40	151		5604.12	-46.374	-27	-19.374	PASS
			5649.58	-50.960	-27	-23.960	PASS
			5725.00	-25.540	27	-52.540	PASS
			5850.00	-47.580	27	-74.580	PASS
			5932.25	-46.604	-27	-19.604	PASS
			24969.5	-53.740	-27	-26.740	PASS
	159		5612.38	-47.629	-27	-20.629	PASS
			5631.17	-52.840	-27	-25.840	PASS
			5725.00	-43.830	27	-70.830	PASS
			5850.00	-36.140	27	-63.140	PASS
			5928.34	-51.550	-27	-24.550	PASS
			5930.38	-44.898	-27	-17.898	PASS
IEEE 802.11ac_20	149		5636.00	-46.676	-27	-19.676	PASS
			5644.24	-51.610	-27	-24.610	PASS
			5725.00	-24.400	27	-51.400	PASS
			5850.00	-47.790	27	-74.790	PASS
			5942.75	-47.172	-27	-20.172	PASS
			24970.9	-54.210	-27	-27.210	PASS
	157		1764.05	-38.100	-27	-11.100	PASS

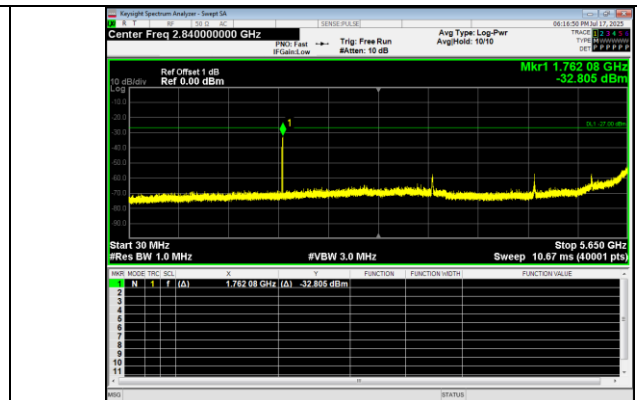


	165	5627.00	-47.325	-27	-20.325	PASS
		5725.00	-47.300	27	-74.300	PASS
		5850.00	-48.290	27	-75.290	PASS
		5947.62	-46.066	-27	-19.067	PASS
		24890.3	-54.490	-27	-27.490	PASS
		5625.50	-47.764	-27	-20.764	PASS
		5638.06	-55.210	-27	-28.210	PASS
		5725.00	-48.260	27	-75.260	PASS
		5850.00	-30.230	27	-57.230	PASS
		5925.00	-52.600	-27	-25.600	PASS
IEEE 802.11ac_40	151	5938.25	-45.407	-27	-18.407	PASS
		3401.44	-42.270	-27	-15.270	PASS
		5641.25	-46.893	-27	-19.893	PASS
		5725.00	-26.060	27	-53.060	PASS
		5850.00	-47.580	27	-74.580	PASS
		5936.38	-46.512	-27	-19.512	PASS
		24316.6	-54.310	-27	-27.310	PASS
		1746.63	-47.650	-27	-20.650	PASS
		5641.25	-47.257	-27	-20.256	PASS
		5725.00	-43.660	27	-70.660	PASS
IEEE 802.11ac_80	159	5850.00	-37.380	27	-64.380	PASS
		5924.00	-44.489	-26.815	-18.229	PASS
		24897.0	-53.820	-27	-26.820	PASS
		5630.61	-40.250	-27	-13.250	PASS
		5638.25	-38.053	-27	-11.053	PASS
		5725.00	-22.950	27	-49.950	PASS
		5850.00	-27.810	27	-54.810	PASS
		5928.50	-39.944	-27	-12.944	PASS
		5944.55	-44.970	-27	-17.970	PASS

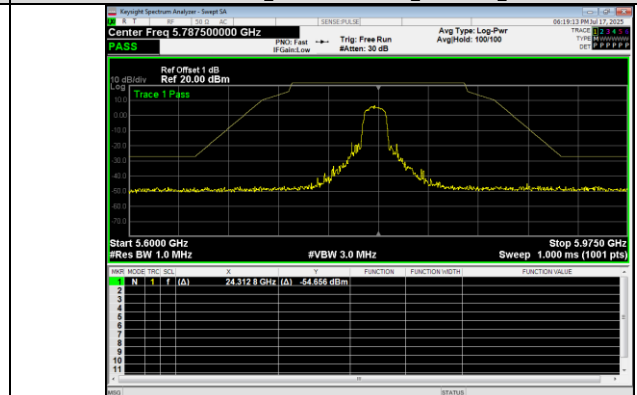
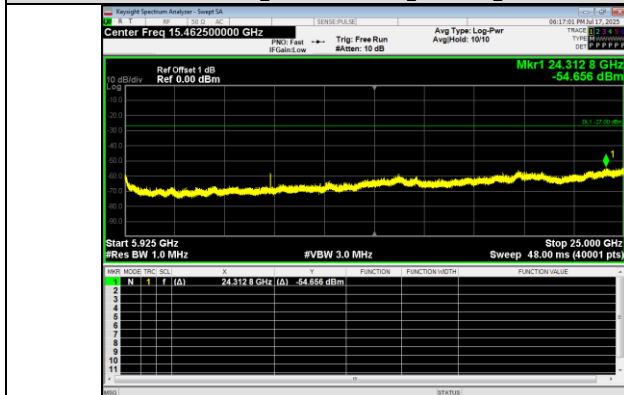
Test Graphs



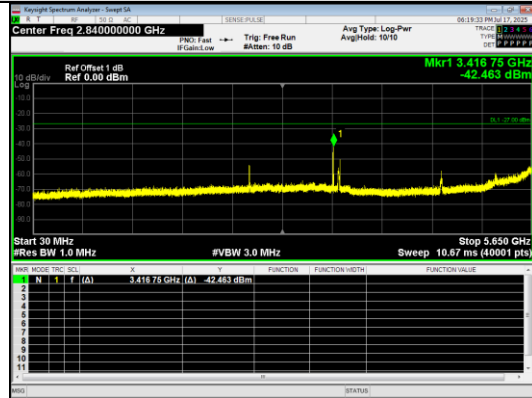
Out Of Band Emission
IEEE 802.11a_Channel 149_20MHz_Antenna 0



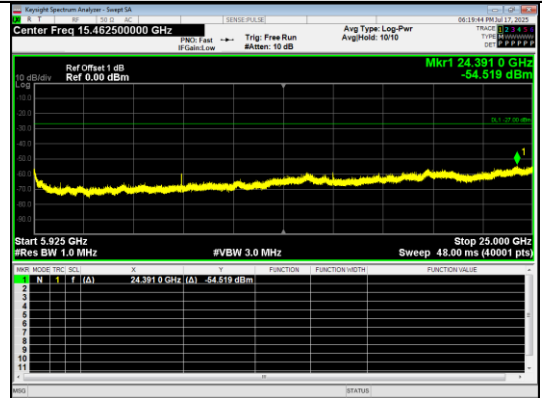
Spurious Emission:30.0~5650 MHz
IEEE 802.11a_Channel 149_20MHz_Antenna 0



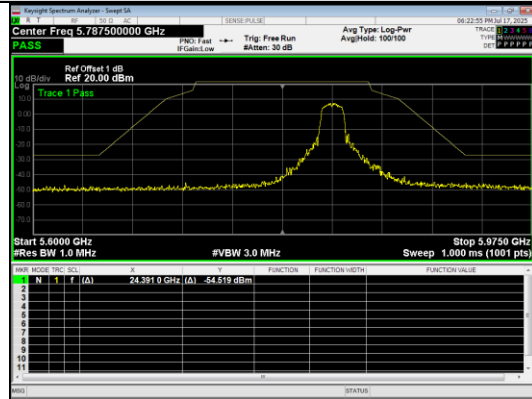
Spurious Emission:5925~25000.0 MHz IEEE 802.11a_Channel 149_20MHz_Antenna 0



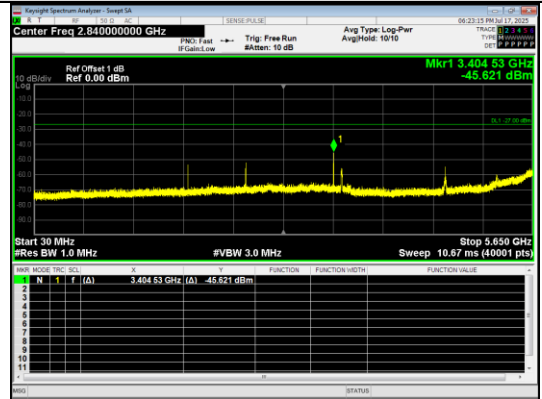
Out Of Band Emission IEEE 802.11a_Channel 157_20MHz_Antenna 0



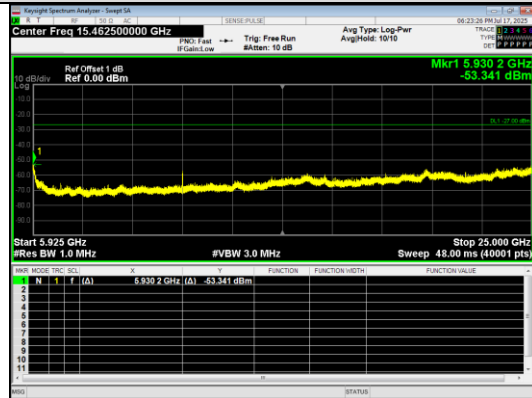
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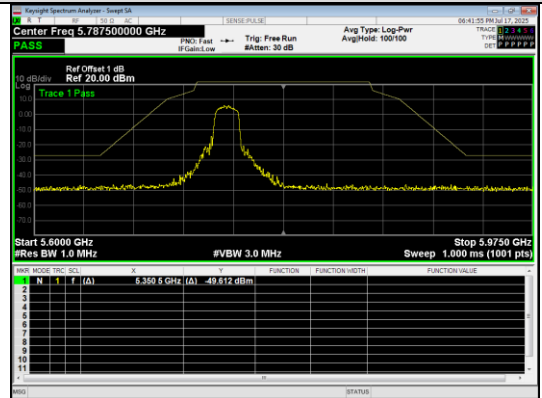
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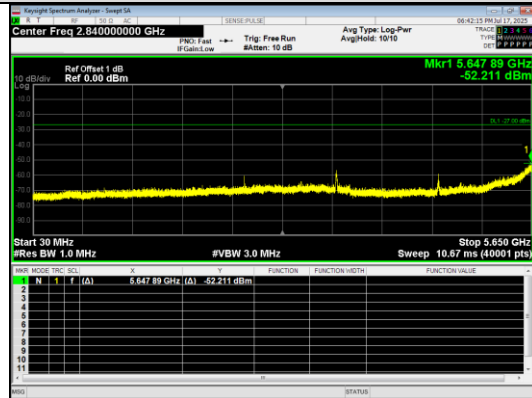
Out Of Band Emission IEEE 802.11a_Channel 165_20MHz_Antenna 0



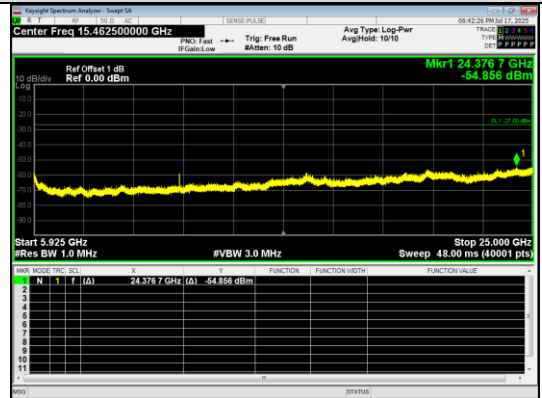
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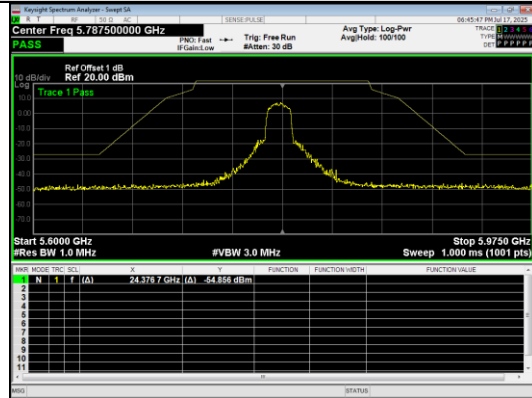
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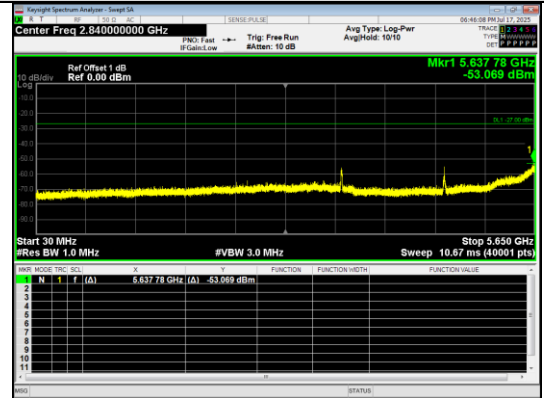
Out Of Band Emission IEEE 802.11n_Channel 149_20MHz_Antenna 0



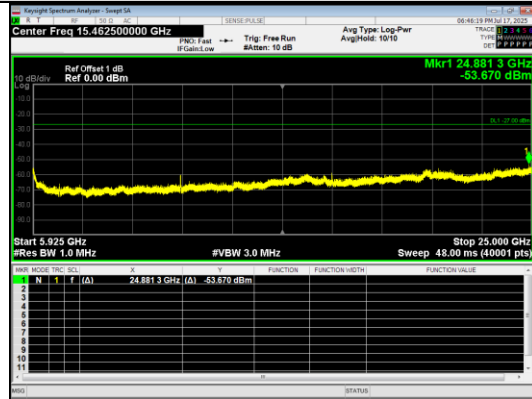
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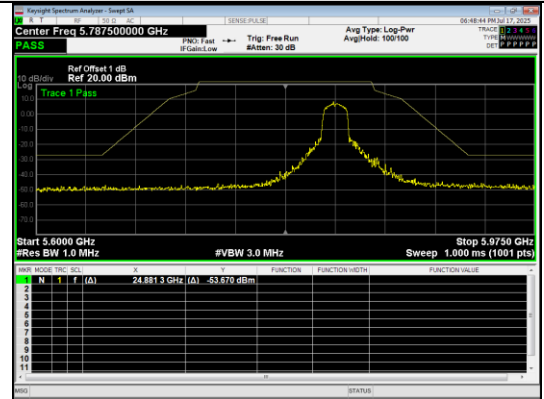
Spurious Emission:5925~25000.0 MHz IEEE 802.11n_Channel 149_20MHz_Antenna 0



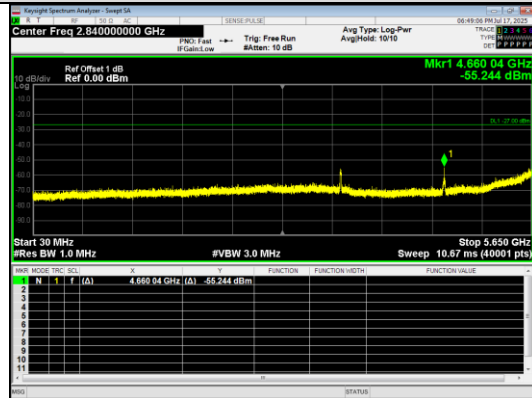
Out Of Band Emission IEEE 802.11n_Channel 157_20MHz_Antenna 0



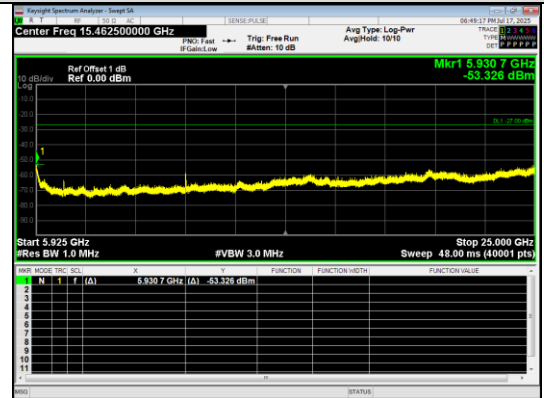
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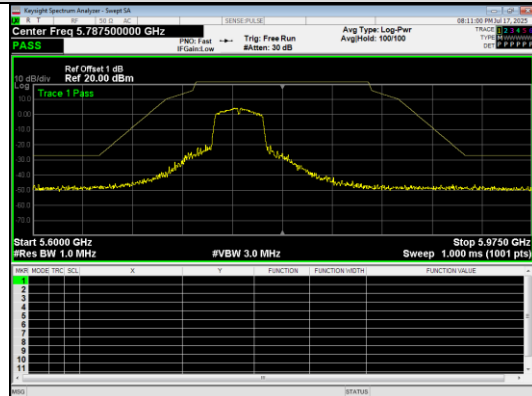
Spurious Emission:5925~25000.0 MHz IEEE 802.11n_Channel 157_20MHz_Antenna 0



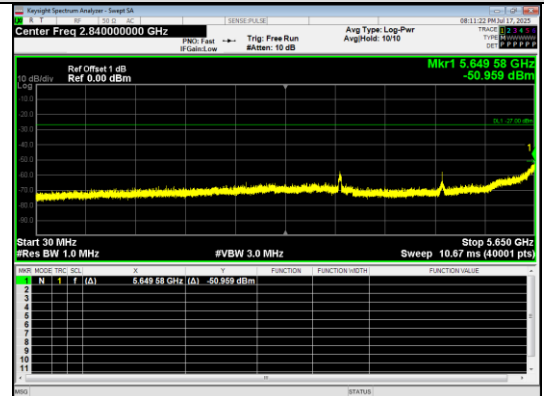
Out Of Band Emission IEEE 802.11n_Channel 165_20MHz_Antenna 0



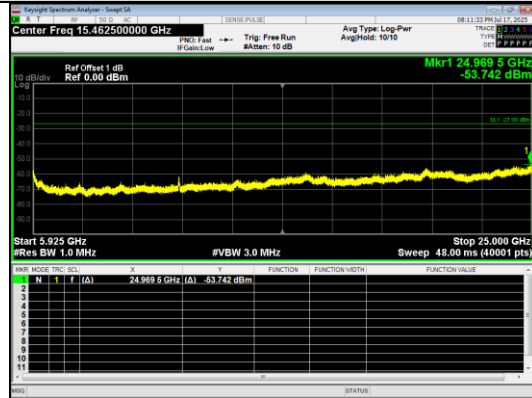
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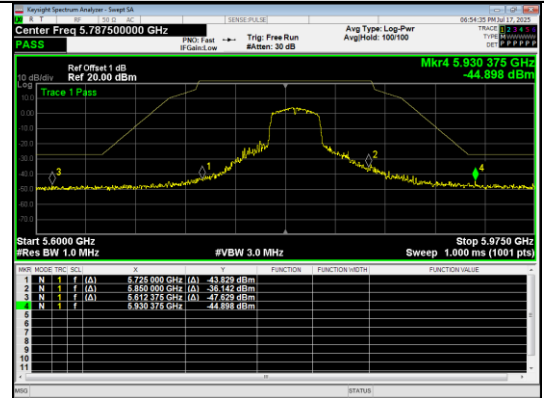
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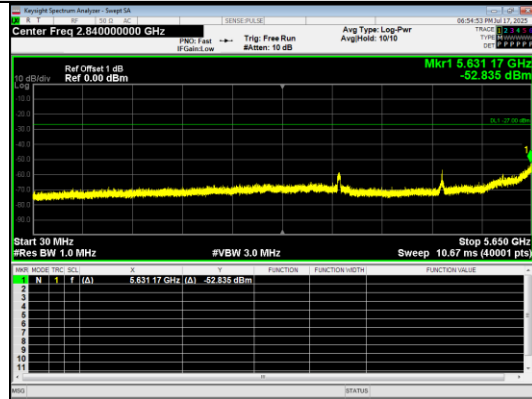
Out Of Band Emission IEEE 802.11n_Channel 151_40MHz_Antenna 0



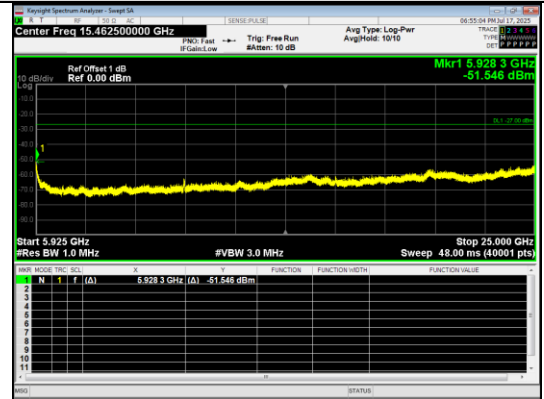
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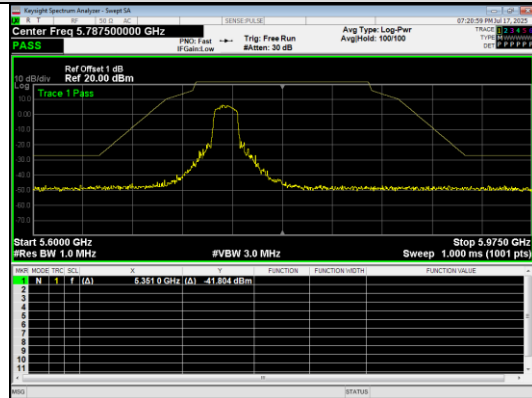
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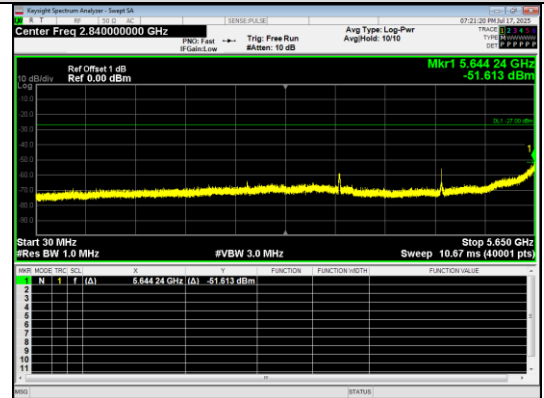
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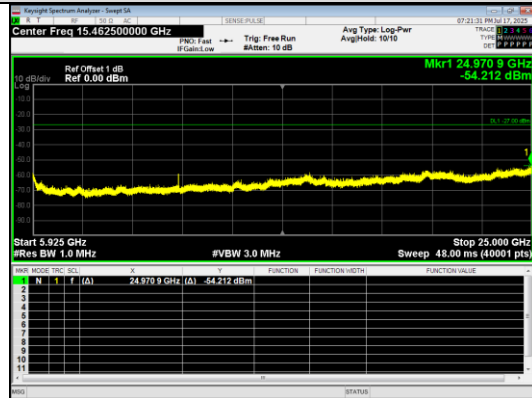
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Spurious Emission:5925~25000.0 MHz IEEE 802.11n_Channel 159_40MHz_Antenna 0



Out Of Band Emission IEEE 802.11ac_Channel 149_20MHz_Antenna 0



Spurious Emission:30.0~5650 MHz IEEE 802.11ac_Channel 149_20MHz_Antenna 0

